

#### ABSTRACT OF THE DISCLOSURE

By using lasers having different wavelengths in laser annealing of an amorphous semiconductor film, the amorphous semiconductor film can be crystallized and the crystallinity of the crystallized film is improved. A laser 126 to 370 nm in wavelength is used first to subject an amorphous semiconductor film to laser annealing, thereby obtaining a crystalline semiconductor film. In desirable laser annealing, a subject surface is irradiated with a laser beam processed by an optical system into a linear laser beam that is linear in section on the subject surface. Next, a laser 370 to 650 nm in wavelength is used to irradiate the above crystalline semiconductor film by again processing the laser beam into a linear beam through an optical system. A crystalline semiconductor film thus obtained has an excellent crystallinity. If this crystalline semiconductor film is used to form an active layer of a TFT, an electric characteristic of the TFT can be improved.